

to a non-elected invention. Claims 27-36 have been canceled without prejudice while retaining applicants' right to file a divisional application thereon.

The Examiner is requiring the submission of a newly executed oath or Declaration because of a typographical error in the application serial number set forth in the original Declaration and Power of Attorney filed for the subject application. Applicants respectfully submit that the requirement for a new oath or Declaration is not justified since the original Declaration and Power of Attorney complies with the requirements for a Declaration and Power of Attorney set forth in 37 C.F.R. §1.63(a)(1)-(4), (b)(1)-(3) and (c)(1)-(2). In particular, 37 C.F.R. §1.63(b)(1) requires that the oath or Declaration "identify the application to which it is directed", and §602 of the Manual of Patent Examining Procedure sets forth various combinations of information which, if provided, will be accepted by the Patent Office as complying with the identification requirement of 37 C.F.R. §1.63. For an oath or Declaration filed after the filing date of an application, §602 specifies that the "attorney docket number which was on the specification as filed" or "title of the invention which was on the specification as filed and accompanied by a cover letter accurately identifying the application for which it was intended by either the application ... or serial number and filing date" will be accepted as complying with the identification requirement of 37 C.F.R. §1.63. In the present case, the attorney docket number set forth in the Declaration and Power of Attorney as originally filed was also set forth in the specification as filed and this alone would fulfill the identification requirement of 37 C.F.R. §1.63. However, in addition, the Declaration and Power of Attorney as originally filed set forth the title of the invention which was on the specification as filed and was accompanied by a cover letter entitled Transmittal of Missing Parts of Patent Application, which accurately

identified the application for which it was intended by the correct serial number and filing date. Accordingly, the Declaration and Power of Attorney as originally filed satisfies all of the requirements for a Declaration and Power of Attorney set forth in 37 C.F.R. §1.63 regardless of the presence of a typographical error in the application serial number. It is further noted that the typographical error in the serial number cannot raise any genuine issue of confusion since the incorrect serial number corresponds to an issued patent with a filing date different from the filing date of the present application. It is respectfully submitted, therefore, that the requirement for a newly executed Declaration and Power of Attorney is unjustified and should be withdrawn.

The specification has been amended to correct various minor informalities. The title has been amended for consistency with the subject matter claimed. The Abstract has been amended for compliance with the recommended word limit as well as the proper language and format for an Abstract of the disclosure.

The objection to claim 1 is submitted to be addressed and overcome with the present amendment since line 4 has been amended to replace "." with ";".

Claims 1-26 and 40-41 stand rejected under 35 U.S.C. §112, 2nd paragraph. In response thereto, the step of "sintering to form a ceramic or metal or composite reticulated article" recited in each of claims 1, 21, 40 and 41 has been amended to "sintering the coated reticulated substrate to form a ceramic or metal or composite reticulated article" to more clearly define what is being sintered. The rejection of claims 7-9 and 11 under 35 U.S.C. §112, 2nd paragraph, is submitted to be moot in view of the amendments to claims 11 and 12. Accordingly, the rejections under 35 U.S.C. §112, 2nd paragraph, should be withdrawn.

Claims 11-13 were indicated as being allowable if rewritten to overcome the rejection under 35 U.S.C. §112, 2nd paragraph, and to include all of the limitations of the base claim and any intervening claims. As pointed out above, the rejection of claim 11 under 35 U.S.C. §112, 2nd paragraph, is believed to be improper and should be withdrawn. Since each of claims 11 and 12 have been amended to be rewritten in independent form to include all of the limitations of the base claim and any intervening claims, claims 11 and 12 should now be allowable along with claims 7, 8 and 13 depending from claim 12 and claim 9 depending from claim 7.

The rejection of claims 1-10, 14-18, 21, 25, 26, and 37-41 as being anticipated by Antsiferov et al and by Kasprzyk et al, the rejection of claims 19 and 22 as being unpatentable over Antsiferov et al in view of Torobin, the rejection of claim 20 as being unpatentable over Antsiferov et al in view of Torobin and further in view of Kasprzyk et al, the rejection of claims 23 and 24 as being unpatentable over Antsiferov et al in view of Kasprzyk et al, the rejection of claims 19, 20 and 22 as being unpatentable over Kasprzyk et al in view of Torobin, and the rejection of claims 23 and 24 as being unpatentable over Kasprzyk et al are all respectfully traversed for the following reasons.

Independent claim 1 recites "(c) contacting the reticulated substrate with the first dispersion to coat the substrate with the dispersion to form a first coating; ... (e) contacting the coated reticulated substrate with one or more additional dispersions of a ceramic or metal powder, a binder, and a solvent, in succession, to form one or more additional coatings wherein each additional dispersion has a viscosity less than the viscosity of all preceding dispersions". The Examiner refers to page 12, lines 16-25 of Antsiferov et al for the disclosure of different dispersion viscosities. However, page 12, lines 16-25 of

Antsiferov et al discloses only that a second slip composition is prepared using substantially the same ingredients as those for the first slip composition but also including a pore-forming additive, without there being any disclosure whatsoever of the viscosities for the first and second slip compositions. The Examiner alleges that the viscosity of the second slip composition may be lower than that of the first slip composition due to the addition of the pore-forming additive; however, there are absolutely no teachings or suggestions whatsoever in the prior art which would make this an inherent feature of Antsiferov et al. Indeed, the pore-forming additive is disclosed by Antsiferov et al as comprising particles (page 13, lines 6-7), which would actually make the second slip composition more viscous than the first slip composition. There are no teachings or suggestions whatsoever by Antsiferov et al of contacting a coated reticulated substrate with one or more additional dispersions in succession, wherein the viscosity of each additional dispersion is less than the viscosity of all preceding dispersions. Accordingly, independent claim 1 is submitted to be clearly patentable over Antsiferov et al and should be allowed along with dependent claims 2-6 and 14-20.

Dependent claim 2 recites "after drying the first coating and the one or more additional coatings form an insoluble, flexible film which can be subsequently deformed without substantially cracking off, flaking off or peeling off of the substrate." Applicants respectfully disagree with the Examiner's assertion that this feature is inherent to Antsiferov et al. The mere disclosure by Antsiferov et al of first and second slip compositions comprising a ceramic or metal powder, a binder and a solvent does not inherently and necessarily result in coatings that form an insoluble, flexible film which can be subsequently deformed as characterized in claim 2, since Antsiferov et al fails to set forth

any specific quantities, proportions or process parameters for obtaining a flexible and deformable film. Accordingly, claim 2 is submitted to be clearly patentable over Antsiferov et al for the additional feature recited therein as well as being allowable with claim 1.

Claim 10 recites a particular viscosity for the first dispersion, and Antsiferov et al does not teach or suggest the viscosity recited. Accordingly, claim 10 cannot be anticipated by Antsiferov et al and is submitted to be patentable for the additional limitation recited therein as well as being allowable with claim 1.

With respect to dependent claim 18, which recites that "the binder becomes solvent-insoluble and is compliant upon drying", it is noted that Antsiferov et al fails to teach or suggest this feature merely by disclosing polyvinyl alcohol and isopropanol binding agents on page 11, lines 29-34. As pointed out above, Antsiferov et al does not disclose any quantities, proportions or parameters which would inherently and necessarily result in the feature recited in claim 18. Accordingly, claim 18 is submitted to be clearly patentable over Antsiferov et al for the additional limitations recited therein as well as being allowable with claim 1.

Claim 19 depends from claim 18 and recites additional features of the binder which the Examiner asserts are disclosed by Torobin. Claim 20 depends from claim 19 and recites a specific quantity for the binder which the Examiner asserts is disclosed by Kasprzyk et al. In addition to Torobin and Kasprzyk et al failing to rectify the foregoing deficiencies of Antsiferov et al, it is pointed out that Kasprzyk et al fails to teach or suggest the specific amount of binder present in the dispersion as recited in claim 20. The Examiner refers to page 7, line 33 - page 8, line 1 of Kasprzyk et al; however, the passage referred to by the Examiner does not contain any disclosure whatsoever of a specific

amount of binder. Accordingly, claims 19 and 20 are submitted to be clearly patentable over Antsiferov et al, Torobin and Kasprzyk et al for the additional limitations recited therein as well as being allowable with claim 1.

With respect to independent claim 1, Kasprzyk et al fails to disclose or suggest a process in which the first dispersion comprises a solvent and in which the viscosities of one or more additional dispersions are less than the viscosities of all preceding dispersions. Kasprzyk et al discloses the refractory material containing slurry used for impregnation as an aqueous suspension (page 7, lines 26-37), but this is not the same as disclosing a solvent. In addition, Kasprzyk et al fails to teach or suggest any viscosity for the first and second refractory materials, and the features of viscosity recited in independent claim 1 are not inherent to Kasprzyk et al. The passages of Kasprzyk et al referred to by the Examiner are silent as to any relationship between the viscosities of the first and second refractory teachings, and the features recited in claim 1 can only be found in Kasprzyk et al by impermissibly supplying teachings and disclosure not found in the reference itself. Accordingly, independent claim 1 is submitted to be clearly patentable over Kasprzyk et al and should be allowed along with dependent claims 2-6, 10 and 14-20.

The formation of an insoluble flexible film as recited in claim 2 is not inherent to Kasprzyk et al, and claim 2 is submitted to be patentable over Kasprzyk et al for the additional limitation recited therein as well as being allowable with claim 1.

With respect to dependent claim 10, it is noted that Kasprzyk et al fails to provide any teachings whatsoever of the particular viscosity recited. Accordingly, claim 10 is submitted to be clearly patentable over Kasprzyk et al for the additional limitation recited therein as well as being allowable with claim 6.

Kasprzyk et al fails to teach or suggest a binder that becomes solvent-insoluble and compliant upon drying, such that claim 18 is submitted to be patentable over Kasprzyk et al for the additional feature recited therein as well as being allowable with claim 1.

With respect to dependent claims 19 and 20, Torobin fails to rectify any of the above-noted deficiencies of Kasprzyk et al, and neither Kasprzyk et al nor Torobin disclose the specific amount of binder recited in claim 20. Accordingly, claims 19 and 20 are submitted to be clearly patentable over Kasprzyk et al in view of Torobin for the additional limitations recited therein as well as being allowable with independent claim 1.

Independent claim 21 recites "(a) providing a first dispersion of a metal or ceramic powder, a binder which becomes solvent-insoluble and polymerizes upon drying, and a solvent, wherein the binder is present in the dispersion in an amount of at least 25% by volume based on the entire volume of the solid components of the dispersion following drying; ... (d) drying the coated reticulated substrate to polymerize the binder and form an insoluble deformable film on the substrate". As discussed above in connection with claims 18-20, neither Antsiferov et al nor Kasprzyk et al discloses, either explicitly or inherently, a binder which becomes solvent-insoluble and polymerizes upon drying, much less a binder present in the dispersion in the particular amount recited. In addition, neither Antsiferov et al nor Kasprzyk et al discloses a step of drying a coated reticulated substrate to polymerize a binder and form an insoluble deformable film on the substrate, and there are no teachings or suggestions whatsoever in either reference which would make the step of drying recited in claim 21 inherent to either Antsiferov et al or Kasprzyk et al. Accordingly, independent claim 21 is submitted to be patentable over Antsiferov et al and over Kasprzyk et al and should be allowed along with dependent claims 22, 24 and 26.

With respect to dependent claims 22 and 24, Torobin fails to rectify the deficiencies of Antsiferov et al and Kasprzyk et al as already pointed out above. Moreover, none of the references cited and applied by the Examiner teach or suggest a binder present in the dispersion in the specific amount recited in claim 24. Accordingly, claims 22 and 24 are submitted to be clearly patentable over Antsiferov et al, Kasprzyk et al and Torobin, considered singly or in any reasonable combination, for the additional limitations recited therein as well as being allowable with independent claim 21.

Independent claim 37 recites "a body ... comprising an inner sintered ceramic or metal or composite material, an intermediate sintered ceramic or metal or composite material disposed over said inner sintered material, and an outer sintered ceramic or metal or composite material disposed over said intermediate sintered material, said inner sintered material having a composition different than the composition of said outer sintered material, said intermediate sintered material having a composition which is a composite of said inner and outer sintered materials." The article recited in claim 37 requires features similar to those recited in claim 12, which were found to be allowable by the Examiner. The features recited in claim 37 are not disclosed or suggested by either Antsiferov et al or Kasprzyk et al, such that independent claim 37 should be allowed along with dependent claims 39-41.

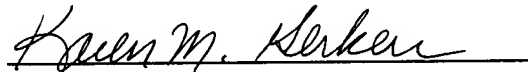
Newly presented independent claim 42 recites "(a) providing a first dispersion comprising zirconia powder, a binder, and a solvent; ... (c) contacting the reticulated substrate with the first dispersion to coat the substrate with the dispersion to form a first coating; ... (e) contacting the coated reticulated substrate with a second dispersion comprising calcium phosphate ceramic, a binder and a solvent to form a second coating

over the first coating". A process utilizing the specific materials recited in claim 42 is not disclosed or suggested by the prior art, and claim 42 should be allowed along with dependent claims 43 and 44.

Newly presented claim 45 depends from claim 37 and recites specific materials for the inner and outer sintered materials. An article comprising the inner and outer sintered materials recited in claim 45 is not taught or suggested by the prior art, and claim 45 is submitted to be clearly patentable for the additional features recited therein as well as being allowable with independent claim 37.

In light of the foregoing, all the claims in the subject patent application are submitted to be in condition for allowance. Action in conformance therewith is courteously solicited. Should any issues in the subject application remain unresolved, the Examiner is encouraged to contact the undersigned attorney.

Respectfully submitted,



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